REMARKS

Claims 1-5, 7-16, 19-20 and 22-56 are pending. In view of the following, all of the pending claims are in condition for allowance. **If, after considering this response, the Examiner does not agree that all of the claims are allowable, then it is respectfully requested that the Examiner schedule a teleconference with the Applicant's attorney to further the prosecution of the application.**

Rejection of claims 1-2, 4-5, 7-16, 19-20 and 22-56 under §102(b) as being anticipated by Leis et al. (US 5,862,005)

Claim 1

Claim 1 recites a position-burst demodulator including an input circuit operable to receive even and odd samples of a first servo position burst, to add the even samples to generate a first sum and to add the odd samples to generate a second sum; an intermediate circuit operable to square the first and second sums, and to add the squared first and second sums to generate a third sum; and an output circuit operable to calculate the square root of the third sum.

For example, referring, *e.g.*, to FIGS. 5-7 and paragraphs 31-40 of the present application, a position-burst demodulator 70 includes an input circuit (adder) 72 operable to receive even and odd samples of the servo position burst, to add only the even samples to generate a first sum E and to add only the odd samples to generate a second sum O. An intermediate circuit 74,76 is operable to square the first sum E^2 and square the second sum O^2, and to add the squared first and second sums to generate a third sum $E^2 + O^2$. An output circuit 78 is operable to calculate the square root of the third sum. *It should be noted that the sequence of samples of the servo position burst is divided into alternating even and odd samples. This is clearly shown in FIG. 5 where the even samples 60 alternate with the odd samples 62, and where the even samples 60 and the odd samples 62 are alternating samples of the same sinusoid. The even samples 60 are handled separately by circuits 72a and 74a, and the odd samples are handled separately by circuits 72b and 74b (FIG. 6; paragraph [34]). Once again, as*

clearly shown in FIG. 5 and as referenced throughout the present application, the even and odd samples are alternating samples of the same burst sinusoid.

In contrast, Leis et al. neither discloses nor suggests a position-burst demodulator including an input circuit operable to receive even and odd samples of a first servo position burst, to add the even samples to generate a first sum and to add the odd samples to generate a second sum; an intermediate circuit operable to square the first and second sums, and to add the squared first and second sums to generate a third sum; and an output circuit operable to calculate the square root of the third sum. Instead, Leis et al. discloses a burst detector 55 that multiplies the sample waveform by two orthogonal sine waves having a phase offset of 90° (FIG. 14B; col. 14, lines 14-35). Each and every sample of the waveform is multiplied by both the sine wave (multiplier 551) and the cosine wave (multiplier 554). *However, this has nothing to do with separating the same servo position burst into alternating even and odd samples*, summing the even samples separately from the odd samples, and then squaring the sum of the even samples separately from the sum of the odd samples. The Examiner states on page 2 of the Office Action that a sine wave is an odd function, and that a cosine wave is an even function. *However, multiplying a waveform by both an odd function and an even function to produce two new waveforms (an odd waveform and an even waveform) is entirely different from separating a single waveform into alternating even and odd samples.* As referenced throughout the present application and *shown clearly in FIG. 5 of the present application*, the even and odd samples are defined as *alternating even and odd samples of the same sinusoid.* Leis, on the other hand, does not separate the sample waveform into alternating even and odd samples. Instead, Leis multiplies the sample waveform by both an odd function (sine wave) and an even function (cosine wave) to produce *two new waveforms.* After reviewing Leis in its entirety, the Applicants' attorney is unable to find any mention of separating a servo position burst into alternating even and odd samples, summing the even samples separately from the odd samples, and then squaring the sum of the even samples separately from the sum of the odd samples. Therefore, Leis does not satisfy the limitations of claim 1.

Claims 4-5, 8-12, 14-16, 19-20, 23-24 and 26-29

Claims 4-5, 8-12, 14-16, 19-20, 23-24 and 26-29 are patentable for reasons similar to those recited above in support of the patentability of claim 1.

Claims 2, 7, 13, 22, 25 and 30-56

Claims 2, 7, 13, 22, 25 and 30-56 are patentable by virtue of their respective dependencies from independent claims 1, 5, 8-10, 12, 15-16, 20, 23-24 and 27-29.

Rejection of claim 3 under §103(a) as being unpatentable over Leis et al. in view of Patapoutian et al. (US 5,661,760)

Claim 3 is patentable by virtue of its dependency from independent claim 1.

CONCLUSION

In view of the foregoing, all pending claims are in condition for allowance. Therefore, the issuance of a formal Notice of Allowance at an early date is respectfully requested.

If, after considering this response, the Examiner does not agree that all of the claims are allowable, then it is respectfully requested that the Examiner contact the Applicants' attorney at (425) 455-5575.

In the event additional fees are due as a result of this amendment, you are hereby authorized to charge such amount to Deposit Account No. 07-1897.

DATED this 21st day of May, 2007.

Respectfully Submitted,

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